

IN THE SPECIFICATION

Please amend the specification as follows. Deletions are enclosed in double square brackets and insertions are underlined.

Please replace the paragraph starting on page 46, line 27, with the following replacement paragraph:

In one embodiment, the S-machine 12 issues 1912 an imperative to the T-machine to indicate that a remote operation is needed. An imperative is a unique command string which the T-machines 14 are designed to recognize. An imperative typically consists of a memory address where the remote operation information is located in local memory 34, and a size delimiter to indicate the size of the addressing information. Multiple remote operations can be requested at a single time by the program being executed by the S-machine 12 by simply specifying a beginning address for the remote operation information and a series of size delimiters. The T-machine 14 is able to then process the different requests for information sequentially. The S-machine 12 then determines 1920 whether there are any other instructions to be performed. If there are, the next instruction is received and executed. Thus, the S-machine 12 is able to almost instantaneously continue the execution of instructions despite the requirement of remote operations. As the T-machine 14 performs the transfer and retrieval of data, the processing power of the S-machine 12 is freed to exclusively focus on processing instructions. Figure 20 illustrates the processing of the T-machines 14 in receiving an imperative from an S-machine 12. First, the T-machine 14 determines 2000 whether a command received on control line 48 from the S-machine 12 is an imperative. Responsive to determining a command is an imperative, the T-machine 14 retrieves 2004 remote operation information through memory/data line 46 from the local memory 34. The remote operation information is preferably located in a consistent location in memory 34 in order to allow the T-machine 14 to retrieve the data without having to determine a new memory address each time remote information is to be retrieved. Alternatively, the remote operation information can be stored in random places in local memory 34; however, the location of the information must then be transmitted as a part of the imperative. After retrieving the remote

operation information, the T-machine 14, specifically, the CICU 302 component of the T-machine 14, generates 2008 a meta-address 1828 from the information. The target local address 1808 is appended to the target geographic address 1804 to form the meta-address 1828. The T-machine 14 then generates 2012 the data packet 1800 from the remaining remote operation information, and transmits the data packet 1800 to the interconnect unit or GPIM 16 for transmission to the destination as required.